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Vegetables and Vitamines

VOLUME II

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A HUNDRED years ago our forbears walked to their courting through paths edged with sturdy bushes which in season bore huge red "berries" called "love apples." No one ate them because they were thought poisonous. Only their beauty saved them.

Had anyone then dared to hold one of these love apples within arm's reach of a child, such action would have seemed equivalent to meditated murder. Yet to-day in our best maternity hospitals little babies frequently are given several tablespoons daily of the juice of this same "poisonous" vegetable, and marvelous to relate, they not only suffer no ill consequences but are, through the agency of this fluid, effectively protected against one of the commonest and most trying of diseases—scurvy.

For human experience, fortified by the ever active brain and hands of science, has transformed the poisonous love apple into the protective tomato. Of course, it was no more poison then than now. The only impediment to its use was ignorance—and it would be highly interesting to know the name of the

person who first risked death by sinking his teeth into the juicy depths of one of those great scarlet globules. Probably to some child we are indebted for this particular benefit.

The Evolution of Lettuce

THE life-story of the tomato, which, within a relatively brief period, has become one of the most popular of all vegetable foods, is in many ways fairly indicative of the manner in which ignorance of vegetable values has interfered with man's palate and health interests. Less dramatic, but equally significant, is that of lettuce.

One need not be on the shady side of fifty to remember when the use of this vegetable was confined largely to decoration of meat dishes in fine hotels and restaurants. The crisp, green leaf served admirably as an artistic attribute, but the average person no more thought of eating it than of chewing up the fluted paper crown worn by the "bony part" of the lamb. In those days—and even now "those days" are not so far behind in some parts of this country—lettuce was admitted to the average home only on state occasions, and then solely for appearance sake. Occasionally some intrepid individual would set smiles rippling by masticating a piece of the garnish, but as for thinking of this leafage as food—that was an absurdity!

Just ten years ago I heard one of the brainiest men in America complain to a noted diet expert that the only objection he had to her work was her

insistence upon the eating of lettuce. "To eat it in quantity sufficient to provide nourishment worth talking about would mean consumption of a peck or so at a sitting," he said. And he was right.

To eat lettuce for nourishment—that is, to eat it to provide heat and energy fuel for the body—would be about as big a fool's errand as ever was undertaken. Yet to-day it is a fixed commodity in our food markets—a year-round staple—and while still possessing all its former good looks, is no longer used merely because of its decorative possibilities.

To-day the growing of tomatoes and their marketing while fresh and canning for out-of-season use has become one of the great field and factory phases of national industry. Thousands of acres are devoted to the cultivation of lettuce which, during the cold months of the year, is shipped in carload lots from Florida and clear across the continent from California.

Because of these two facts, millions of Americans now are carrying with them to their work and play more comfortable and efficient bodies and clearer, more capable minds. For while neither of these products, which may be said to lead the procession of the so-called watery vegetables, has enough caloric food value to justify any discussion of its merits as food-fuel, each possesses a bountiful supply of vitamines. In addition to this, each provides a combination of certain mineral salts as necessary to proper nutrition as the starches, fats and sugars with which the body engine is stoked.

Who's Who Among Watery Vegetables

THIS procession of watery vegetables, which must include in its line of march every American home if as a people we are to develop and maintain a right measure of physical fitness, unwinds such pleasant offerings as asparagus, cabbage, celery, cauliflower, cucumbers, peppers, squash, spinach, radishes, turnips and the various salad greens, in addition to the two leaders already named.

All of these products of the soil—and each of them can be grown with ease and profit in the home garden—are composed chiefly of water, and none contains more than twenty-five grams of carbohydrates to the pound. So to use them for generating heat or energy in the body would be like using tissue paper in place of coal in the kitchen range. Of course, by keeping everlastingly at it, the paper might be made to produce a certain degree of heat, but the person at the stove would have no time left for preparation or cooking of food.

It is not nature's intention that these vegetables should provide heat and energy. But the wise old mother of us all knows our varied needs in this basic matter of food, and through such vegetables as here are named offers elements that are as necessary for growth, development and maintenance of health and strength as the heat-givers and muscle-builders.

Vegetable Gold Mines for the Body

MOST of them are rich in vitamines, but these indispensable elements do not constitute their sole

virtue. Blood, bone and muscle lean heavily for support on certain minerals, chief among which are iron, lime, salt, potassium, phosphorus, magnesium, sulphur and silica. Without a right proportion of these mineral salts in the daily diet, physical depletion is bound to result and the door is held open to disease.

There is iron in tomatoes, for instance. A pound of them contains as much of this mineral as the average person needs during the day. Spinach is notably rich in iron. Lettuce and onions also contain it. From turnips we get phosphorus and potassium, while celery gives us lime and magnesium. Asparagus also contains the last-mentioned combination, and cabbage and Brussels sprouts offer lime and potassium, to which cauliflower adds sulphur.

So while these vegetables are not body-builders in the strict sense of the term, they are notable blood stimulators and purifiers, and many of the vital fluids are dependent on their presence. They carry their chemical benefits in a form man never has been able to imitate, for try as he may he has not yet discovered how to make them easily assimilable save as nature provides them in vegetable forms.

Because of their delightful flavor and high degree of succulency, tomatoes are perhaps the most generally popular of this group. In addition to its vitamine content this vegetable possesses the mineral virtues already referred to, and also provides the system with a certain amount of citric acid. Espe-

cially when eaten raw it is an excellent stimulant of intestinal activity.

The Protective Tomato

So far as vitamines are concerned, the tomato occupies a unique position among vegetable foods, in that the particular form of the anti-scurvy vitamines it contains is not so easily destroyed by heating or drying as is the case in most other vegetable carriers of this invaluable protective element. It has been found that the juice of canned tomatoes is almost as effective in this function as that of fresh ones, and because this juice, in either case, is so much cheaper than that of oranges, many dietitians recommend it as the ideal preventive of scurvy in infants fed on pasteurized milk.

During the great war, canned tomatoes were largely used to allay thirst, and it was scientifically ascertained that for this purpose it is as effective as fifteen times its volume in water. Moreover, the tomato is endowed with both the fat-soluble and water-soluble vitamines.

For use as a salad is runs a close race with lettuce, though the latter is more generally used for this purpose than any other green. Unlike some of the other watery vegetables, the tomato is equally well adapted to cooking, and can be served in an almost endless variety of dishes and combinations. It is one of the few vegetables that is literally available "from soup to nuts"—for it supplies material for soup, vegetable, salad and meat combinations.

The best chefs rarely omit tomato from any soup, however small the measure. And the wise homemaker not only includes it frequently in the daily diet, but takes advantage of the ease with which the plants can be grown to provide her own supply of fresh tomatoes during the growing season.

To over-state the value of lettuce would be almost impossible. Here is a delightful, tempting protective foodstuff which adds as much to the nutritive value of other foods as it does to the appearance of daintiness in serving.

Wash Them for Safety's Sake

JUST here let me put in a special word about the washing and care of garden products. As a rule it is the part of wisdom to wash all vegetables before using, whether or not they are to be cooked. They may be covered with bacteria from the hands of the pickers or from the soil in which they grew, and since the operation of washing requires little time or labor it is a worth-while protection. A five per cent solution of peroxide of hydrogen is a good disinfectant, and in no way affects the flavor. Of course, vegetables to be eaten uncooked should be most carefully and thoroughly washed.

All summer vegetables that are not to be eaten raw should be cooked as soon as possible after gathering. If they must be kept for a day or overnight, it is well to spread them on the floor in a dry, well-ventilated cellar, or place them in an ice-box or refrigerator that is free from moisture.

Here arises a question which should be definitely answered. Do raw vegetables give the stomach more work than cooked vegetables?

If raw vegetables are eaten when fresh and young and ripe, it is probable they put less strain on the digestive organs than when eaten cooked. Of course, the ease of digestion and thoroughness of assimilation depend primarily upon thorough mastication. Chew them well, and unless you happen to be possessed of some idiosyncrasy, they will be handled by your stomach as comfortably and quickly as the average run of foods.

Another good reason for making larger use of raw vegetables in the diet is that by so doing we procure a larger intake of cellulose—roughage which is not digestible, but passes on into the intestines and plays a helpful part in the functioning of this most important channel of elimination.

Spinach—"The Broom of the Stomach"

SPINACH is the great iron-giver among vegetables. Now, every cell in the human body contains a certain infinitesimal amount of iron—and without this mineral there could be no such a thing as rich, life-giving blood. When you see a pale, listless, dragged-out person, in nine out of ten cases the root of the trouble is lack of iron.

Spinach is a vegetable "iron mine," and it supplies this vitally necessary mineral in a form eagerly welcomed by the millions of mouths in the walls of the intestines. Nature so presents it in this valuable

leaf that these countless doorways to the system always are open to it.

"But my folks, especially the children, don't like spinach," says many a housewife.

In all probability this is because she has kept on serving it in just the one way—boiled until almost black and dishes unadorned. Now, there are almost as many ways of serving spinach as any other vegetable, and it is so admirably adapted to various meat combinations that there is little excuse for letting it become a monotonous dish. And it is excellent when eaten raw, in a salad like lettuce.

The French learned wisdom in regard to spinach long before the rest of the world awoke to its value. They call it "the broom of the stomach," because it provides a good deal of "roughage" and thus helps to "sweep" the food residue out of the body through the colon.

It is one of the vegetables that can advantageously be fed to infants. If well cooked—steamed rather than boiled, for in this way the mineral salts are better conserved—it makes an ideal addition to the daily diet of any baby whose body condition is below par.

When fed to such little folk it should first be rubbed through a sieve, so as to prevent the intake of any coarse leaves or particles. Many physicians advocate its use in this way as early as six months, at which time as much as a tablespoon a day may be given safely, increasing to double this amount at nine months and treble at one year.

Cabbage an Important Food

ANOTHER vegetable which has come to be looked upon in a different light within the past few years is cabbage. Many persons, thinking only of corned beef and cabbage, regard this rich and filling dish as typifying the place of cabbage in the diet and sidestep such heartiness.

Corned beef and cabbage in the diet is all right in its place—a man at hard manual labor can handle it with ease—but it by no means represents the proper rôle of this plentiful vegetable in the daily diet. Not even plain boiled cabbage can assume this responsibility. For here is a vegetable which is most beneficial and most easily digested when eaten raw.

It should be borne in mind, however, that thick-leaved green vegetables are not as rich in the so-called "leaf" qualities as thin-leaved ones. Lettuce, spinach and beet and turnip tops are of more value as protective foods than cabbage, though it deserves high place in the diet.

Cold slaw—or cole slaw, as many persons call it—is a dish which should find frequent place on our tables. In the first place, it is one of the tastiest and most easily made of salads, and in the second place, it is on the best of terms with the average stomach. Then, too, when cabbage is eaten raw, we get the full benefit of its vitamine content.

Chinese cabbage, which has lately been introduced in this country, is superior to the kind we know, being more delicate in texture and flavor and of great excellence for salads.

Highly Useful "Useless" Vegetables

RADISHES, cucumbers and asparagus form a trinity of vegetables which, from the standpoint of heat and energy provision, are not on the calling list of the Calories! And a great many persons have a deep-set prejudice against the second member of this group.

Well, this is so much a matter of the sticking power of a bad name that I am glad to say recent dietetic investigations have shown that cucumbers seem to agree with as many persons as they disagree with. And the old idea that they should be salted before eating, in order to make them more digestible, appears to have been exploded.

As for the radish, that first food flower of the spring, it serves as a sort of stomach stimulant, and while it disagrees with some persons, the majority find it very "peppy" and have no trouble in handling it.

Indeed, as one of the edible roots, the radish should be more largely used. With its kindred, carrots, beets and turnips, it is one of the best correctives for constipation, since it helps the eliminative function of the intestines by making the food-waste bulky and rich in water. When it comes to protective features, however, the leaf vegetables of course are superior to the edible roots.

No vegetable finds larger favor than asparagus, albeit there lurks little or no "food value" in the succulent stalk. But—and this is a "but" worth remembering—it has a tempting flavor, and it also

exerts an active influence on the kidneys. There is no scientific foundation for the popular notion that asparagus must be avoided by persons suffering from rheumatism.

Raw or Cooked—As You Choose

WITH the exception of asparagus, cauliflower and squash, all the vegetables included in this watery group can be eaten raw—some of them, as lettuce and radishes, seldom are eaten any other way—and many are not only equally palatable in the raw state but even more easily digested.

This latter fact would seem to indicate that nature wishes us to make larger use of such vegetables as can be eaten uncooked. And while it took man a long time to discover the reason for this, we now have it on the highest scientific authority that the raw vegetable, especially the raw leaf vegetable, is one of nature's favorite vehicles for the transportation of vitamines into the human system.

Without vitamines, as we now know, man would be at the mercy of certain so-called nutritional diseases—scurvy, rickets, beri-beri and pellagra—and children would fail to develop into strong-bodied men and women. Although we do not know just how these curious food elements get in their wonderful work, it has been proved time and again that a deficiency of vitamines in the diet leads not only to underdevelopment and general debility, but actually brings on the diseases just named and probably aids in the development of other equally serious

affections. More than this, it has been conclusively shown that addition of vitamines to a diet deficient in them will relieve these conditions.

Now it is a matter of general acceptance among scientists and dietitians that the vitamine power of vegetables is decreased, if not entirely destroyed, by cooking. As a general rule, vegetables eaten raw are the best carriers of these invisible life-guards, Hence the special virtue of salads, which within the past few years have come into their own.

The Supreme Need of Salads

It is not such a long time since a salad was looked upon as a bit of fancy added to the "facts" of a meal; a more or less inconsequential decorative effect. That was before we had come to know about vitamines and the great part they play in making us well and strong and keeping us so. Now we are aware that the salad is one of the really invaluable parts of the meal and when served with French dressing or mayonnaise, it assumes a solid as well as salutary rôle.

In making your French dressing, however, try lemon juice instead of vinegar. The acid is even more agreeable to the tongue, and the effect on the delicate and sensitive stomach membranes is more healthful.

The green salad is such an important part of the meal that it always should be served as the first course. In this way we can insure ourselves against

lack of vitamines, for when left to a later part of the meal, the salad may be neglected.

No one can afford to neglect green salads. They are absolutely necessary, especially in these days of so much indoor work.

No one can afford to neglect fresh green vegetables. It is a high duty to health to make the largest possible use of them in the daily diet; to learn something about the values of the various kinds, and make a study of the different ways in which they can be prepared and combined. Let no day pass without at least one such dish in the menu of at least one meal, and be sure that two are better than one.

They are nature's food-guards for health, and she supplies these benefits in a form so pleasing to the palate that no one can help wanting them. In all consideration of food, in all questioning as to what to eat, remember this—vegetables are vital!

SECRETS OF THE NEGLECTED ART OF COOKING VEGETABLES FOR HEALTH, TASTE AND ECONOMY

VEGETABLE cookery might be called a lost art—if we were by any means sure it was ever discovered—until recent years brought the newer knowledge of nutrition to public attention. That remarkable discovery of the vitamines or life-giving elements which abound in vegetables and the research of nutritional scientists upon the value of mineral salts to body health has brought vegetables into the limelight.

Now persons of both sexes, mothers and fathers of growing families and those who wish especially to be physically fit recognize the important rôle of vegetables in human economy.

Select fresh, firm young vegetables.

Cook vegetables without peeling whenever practicable.

Prepare vegetables just before cooking. The old practice of paring them when convenient and letting them stand in cold water for several hours before cooking causes a great loss of mineral matter. A pinch of salt added to the water, however, helps to conserve the mineral salts when this method of preparation is necessary.

Use simple methods of cooking so as to preserve the characteristic flavor of each vegetable. Cook in as little water as possible and be sure to conserve whatever is left when the vegetables are done. Use this for a sauce or for soup.

Flavor is lost by overcooking. Watch vegetables

carefully and remove from the fire as soon as tender.

Cook in a closely covered vessel all sweet flavored vegetables. These are carrots, beets, peas, spinach, etc. Use just enough water to cover them.

Cook strong flavored vegetables in an uncovered vessel. Onions, cabbage, cauliflower and Brussels sprouts are of this class. Cook them in plenty of boiling water.

Best Methods of Cooking

Remember also the following points: Vegetables should be kept actively boiling during all the time they are on the stove. Quick cooking helps to preserve their flavor. The use of salted water preserves flavor and nutritive value, but the use of soda should not be encouraged; it softens the cellulose or fibre, but causes a great loss of minerals and vitamines.

Steamed vegetables have a greater nutritive value than boiled. A steamer can be improvised by using a colander or large strainer set in a covered saucepan of boiling water.

Some vegetables, notably sweet and white potatoes, onions, beets, squash, egg plant and tomatoes are at their best when baked. There is very little loss of nutritive value in vegetables cooked by this method.

A steam-pressure cooker can be used to advantage in cooking vegetables, as the high temperature used softens the cellulose quickly and cooks the starch without much loss of nutritive value—either minerals or vitamines.

Time Table for Boiling Vegetables

Potatoes	20 to 30 minutes
Peas, fresh	30 to 50 minutes
String beans	40 to 60 minutes
Lima and other shell beans	40 to 60 minutes
Dried peas	1 to 1½ hours
Dried beans	1 to 1½ hours
Carrots	20 to 40 minutes
Parsnips	20 to 40 minutes
Beets, young	30 to 60 minutes
Beets, old	1 to 3 hours
Corn	15 minutes

RECIPES

All the vegetables mentioned in the following recipes, except the cabbage family, should be cooked in covered vessels.

Asparagus

Cut off the lower part of the stalks as far down as they will snap. Wash, remove scales and tie in bunches. Stand the bunches upright in boiling salted water that does not come up to the tips, and boil for twenty minutes or until tender. The tips should remain out of the water for the first ten minutes, after which water can be added to cover them. Drain, remove strings and serve on toast with melted butter, Hollandaise sauce or drawn butter.

Asparagus in White Sauce

Cut asparagus in one-inch pieces. Set aside the tips and cook the other pieces in boiling salted water for twenty minutes or until tender. As the tips are soft and require little cooking, they should not be placed in the kettle until the other pieces have been boiling for ten minutes. When ready, drain the asparagus and pour over it one cupful of white sauce. Serve in croustades of bread.

Creamed Radishes

Cut large radishes crosswise in thin slices. Cook in boiling salted water for ten minutes or until tender. Drain and mix with cream sauce, allowing one-half cupful of sauce to two cupfuls of radish slices.

Boiled Dandelions

Select only young, tender leaves of dandelion. Wash thoroughly in several cold waters, carefully removing all pieces of grass or other foreign substances. Cover with cold water, heat to boiling point, and boil for five minutes. Drain, cover with fresh boiling water and cook for twenty minutes or until tender. Drain thoroughly, chop finely and season with salt, pepper, melted butter, lemon juice or vinegar. Garnish with hard-boiled egg cut in thin slices.

Spinach

Soak spinach in plenty of cold salted water for about thirty minutes. Lift from salted water into clean fresh water. Remove root ends and any foreign substance that may be clinging to it and wash in several clean waters. The spinach should be lifted from one water to another, in order that the sand and grit may sink to the bottom of the pan. If the water is poured off, the sand is pushed back with the spinach. Lift from the last water into a deep pan, cover closely and heat slowly to the boiling point without adding any water, as enough

will cling to the spinach to keep it from burning. Boil rapidly about twenty minutes or until tender. Drain, chop finely and serve seasoned with butter, salt and pepper.

Chopped Spinach and Egg

Chop three cupfuls of cooked spinach and two hard-boiled eggs. Melt two tablespoonfuls of butter or margarine in a shallow saucepan and add the spinach, eggs, one teaspoonful of salt and a few grains of grated nutmeg. Cook slowly, stirring constantly until very hot.

Brussels Sprouts

Pick over one quart of sprouts, removing stem ends and any discolored leaves. Soak in cold salted water for thirty minutes to remove grit or insects, then drain. Cook for thirty minutes or until tender in just enough boiling water to cover. Lift from the water into a hot serving dish. Mix one-half cupful of the sprout water with four tablespoonfuls of butter or margarine, one teaspoonful of salt and a few grains of nutmeg. Heat until the butter melts, pour over the sprouts and serve very hot.

Cabbage

Cut cabbage in quarters, soak in cold salted water for twenty to thirty minutes, and drain. Cut in small pieces and place in a large saucepan. Cover with boiling water with salt to season, and without covering, boil rapidly for twenty to thirty minutes. Drain, chop and season as desired. Cabbage cooked in this way is white, flaky and delicate in flavor.

Cabbage Au Gratin

Chop very fine three cupfuls of cooked cabbage. Melt two tablespoonfuls of butter or margarine, add two tablespoonfuls of flour and stir in one cupful of milk. Cook until the mixture is thick and smooth, then add one teaspoonful of salt and one-fourth teaspoonful of paprika. Fill a greased baking dish with alternate layers of cabbage and sauce until the ingredients are all used. Cover with one-half cupful of bread crumbs mixed with two or three tablespoonfuls of melted butter. Bake in a moderate oven for twenty minutes or until the crumbs are well browned.

Cauliflower—New Style

Soak a large firm head of cauliflower, head downward, in cold salted water for thirty minutes. Drain and cook, head downward and uncovered, in boiling salted water for thirty minutes or until tender. Drain, saving one cupful of the water. Place the cauliflower in a baking dish, taking care not to break the head. To four tablespoonfuls of melted butter or margarine add five tablespoonfuls of flour

and stir in one cupful each of milk and cauliflower water. Cook until thick and smooth, then pour over the cauliflower. Sprinkle thickly with a mixture made of one-half cupful each of fine bread crumbs and grated stale cheese. Bake in a quick oven until the top is browned.

Steamed Squash

Cut squash in quarters and scrape out seeds and all stringy portions. Cut in pieces and peel. Steam for forty minutes or until tender. Mash, season with butter, salt and pepper, and serve hot.

Fried Summer Squash

Cut summer squash crosswise in slices about one-half inch thick. Peel and remove seeds. Dip each slice in beaten egg diluted with a little cold water and then in fine bread crumbs. Sauté in hot fat until brown and tender.

Table Celery

To prepare celery for table use, cut off the roots and leaves, separate the stalks, wash, scrape and chill in ice water. A slice of lemon in the water will keep the celery white and crisp. Curled celery is made by cutting it in water. Fringed celery is made by cutting both tops and ends of the stalks in fine shreds for about one and one-half inches. These curl back as they chill in the ice water and produce an attractive appearance.

Tomato and Cream Cheese Salad

Scald, peel and chill three or four large, firm, ripe tomatoes. Mix one large cream cheese or one cupful of cottage cheese with one tablespoonful of melted butter, one teaspoonful of salt, one-fourth teaspoonful of paprika and one tablespoonful of milk or cream. Cut the tomatoes across in thick slices and put together sandwich fashion with a thick layer of cheese. Arrange on lettuce leaves and serve with French dressing.

Baked Tomatoes à la Creole

Wash six large firm tomatoes and cut a slice from the top of each. Scoop out the pulp, leaving a shell about one-fourth inch thick. Chop the pulp and mix with one cupful of cold minced meat or chicken, one cupful of bread crumbs, one tablespoonful each of finely chopped onion and pepper, one teaspoonful of salt, cayenne and paprika to season. Stuff the tomato shells with the mixture, sprinkle with butter crumbs and place in a greased baking dish. Bake in a moderately hot oven until the tomatoes are tender and the crumbs brown. Baste when necessary with one-half cupful of boiling water to which has been added three tablespoonfuls of melted butter. When tender, remove to a hot platter, surround with two cupfuls of hot boiled rice and serve with tomato or creole sauce.

Baked Tomatoes and Spaghetti

Wash six large firm tomatoes and cut a slice from the top of each. Scoop out the centers, leaving a shell. Sprinkle with salt and pepper. Mix three cupfuls of cooked spaghetti with one cupful of white sauce and three tablespoonfuls of grated cheese. Fill the tomato shells with the spaghetti mixture, sprinkle with grated cheese and bake in a hot oven until the tops are brown and the tomatoes tender.

Cold Slaw in Cabbage Shell

Soak two cupfuls of shredded raw cabbage in cold water for about an hour. Drain thoroughly and mix with one large green pepper cut fine and two-thirds cupful of French or cooked salad dressing. Serve in a cabbage shell and garnish with slices of green pepper.

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